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| 09/807,522      | 04/12/2001  | Hans-Detlef Groeger  | P01.0132            | 9081             |

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EXAMINER

PHAN, RAYMOND NGAN

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2111

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n N .

09/807,522

Applicant(s)

GROEGER ET AL.

Examiner

Raymond Phan

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14 is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

Art Unit: 2111

### **Part III DETAILED ACTION**

#### ***Notice to Applicant(s)***

1. This application has been examined. Claims 1-14 are pending.
2. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2111.

#### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 5-11, 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sexton et al. (US No. 5,072,374) in view of Kato et al. (US No. 6,546,019).

In regard to claims 1, 5-6, 14, Sexton et al. disclose the method comprising a parallel bus (i.e. common bus); a plurality of module connected to the parallel bus wherein the plurality of module each including a processor, the memory device and

a DMA controller (see figure 2), the bus interface connecting the plurality of module in the parallel databus such that the data are transmitted between the transmitter (i.e. master) of the plurality of slaves with messages without the use of processor (see col. 3, line 53 through col. 4, line 62). But Sexton et al. do not specifically disclose the bus controller of the transmitter being fashioned such that the transmitter programs the DMA controller to read out data stored in the memory of the transmitter and send them to the receiver in response to the request message of the receiver. However Kato et al. disclose the system such that the first CPU 1a programming the first DMA 2a to transmit the data to the unit 10b see figure 2, col. 5, line 8 through col. 6, line 35). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Kato et al. within the system of Sexton et al. because it would provide a faster data transferring and relieve the burden on the processors.

In regard to claim 2, Sexton et al. disclose wherein the DMA controller is integrated into the bus controller of the transmitter (see col. 3, lines 1-20).

In regard to claim 7, Sexton et al. disclose the step of sending plurality of data messages respectively containing data packet to the slave from the bus interface of the master following the reception of the request message (see col. 3, line 53 through col. 4, line 62).

In regard to claim 8, Sexton et al. disclose the step of sending information for programming the DMA controller (see col. 3, line 53 through col. 4, line 62).

In regard to claim 9, Sexton et al. disclose the step of programming the DMA controller to transmit the stored data in the memory (see col. 3, line 53 through col. 4, line 62).

In regard to claim 10, Sexton et al. disclose the programming the DMA controller for reception of the data with transmission of the request message (see col. 3, line 53 through col. 4, line 62).

In regard to claim 11, Sexton et al. disclose the transmitting of data with plurality of message that respectively contained a data packet (see col. 3, line 53 through col. 4, line 62).

6. Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Sexton et al. in view of Kato et al. further in view of Solari (US No. 5,241,628).

In regard to claim 3, Sexton et al. and Kato et al. teach the claimed subject matter as discussed above except the teaching of Multibus II. However Solari discloses the use of Multibus II (see col. 4, lines 59-67). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Solari within the system of Sexton et al. and Kato et al. because it would a faster and simpler way to which a bus architecture such as MBII can support interrupt and DMA requests.

7. Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Sexton et al. in view of Kato et al. further in view of Bowes et al. (US No. 5,828,856).

In regard to claim 4, Sexton et al. and Kato et al. teach the claimed subject matter as discussed above except the teaching of fail-safe counter for monitoring message transfer that is restarted upon reception of data message. However Bowes et al. disclose the count register (see col. 11, lines 24-41). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was

Art Unit: 2111

made to have combined the teachings of Bowes et al. within the system of Sexton et al. and Kato et al. because it would increase the performance of DMA controller.

### ***Allowable Subject Matter***

8. Claims 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claim 12 is allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts which teach the step of providing an entry in a buffer of the transmitter is provided for each assembly present in the control device, so that the parameter characterizing the data transfer are written into the respectively entry and stored during a data transfer and are erased after the conclusion of the data transfer.

The remaining claim, not specifically mentioned, is allowed for the rationale from the parent claim by dependency.

### ***Conclusion***

10. All claims are rejected.

11. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.

**Amrany et al. (US No. 6,412,027)** disclose a direct access memory controller having on-board arbitration circuitry.

Art Unit: 2111

**Yammamoto (US No. 6,453,368)** discloses an adding a dummy data or discarding a portion of data in a bus repeater buffer memory for a second data transfer to the second bus.

**Heer (US No. 6,341,328)** discloses a method and apparatus for using multiple co-dependent DMA controllers to providing a single set of read and write commands.

**Maruyama (US No. 6,119,176)** discloses a data transfer control system determining a start of a DMA using rates of a common bus allocated currently and newly requested.

**Smith (US No. 6,047,337)** discloses a parasitic personal computer interface.

**Batra et al. (US No. 4,930,069)** disclose a mechanism and method for transferring data between bus units having varying masters and slave DMA capabilities.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (703) 306-2756. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary, Paul Myers can be reached on (703) 305-9656 or via e-mail addressed to paul.myers@uspto.gov. The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [raymond.phan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.



**Raymond Phan**

2/7/04